

ABSTRACT

A laser alignment device provides horizontal and vertical reference planes, lines, and points. The alignment device includes a pendulum assembly that supports a laser beam source assembly, two reflectors, and two motors. The laser beam source directs beams onto the reflectors — producing a horizontal reference beam and a vertical reference beam. Each reflector is rotated by one of the motors. Continuous rotation generates a reference plane; dithering generates a reference line, and no movement results in a reference point. The pendulum assembly includes a coarse pendulum that supports a fine pendulum, as well as the rotating motors and beam reflectors. The coarse pendulum roughly levels the alignment device. The fine pendulum supports the laser beam source assembly and brings the alignment device to a level position. The laser alignment device also includes a motor control system that enables users to accurately position the device's references.